

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) An apparatus for optically inspecting a sample, the apparatus comprising:
- an illumination source that generates a probe beam;
 - a series of optical components that cause a portion of the probe beam to be reflected by a measurement area on the sample surface and subsequently transported to a detector, where the series of optical components includes at least one mirror, meeting the condition $TSE(D) \leq 2e^{-0.15D}$ where $TSE(D) = E_{mirror}(D)/E_{ideal}(D)$ where $E_{mirror}(D)$ is the encircled energy of the mirror measured as a function of the included diameter D and $E_{ideal}(D)$ is the encircled energy for an ideal diffraction-limited mirror of equal focal length and numerical aperture; and
 - a processor for analyzing signals generated by the detector.

Claims 2-6. (cancelled)

7. (original) An apparatus for optically inspecting a sample, the apparatus comprising:
- an illumination source that generates a probe beam;
 - a first series of optical components that direct the probe beam to be reflected by the sample;
 - a second series of optical components that gather the reflected probe beam from a measurement area on the sample surface, where the series of optical components includes at least one mirror, and where the series of optical components transports at least 99% of the gathered illumination to a detector; and
 - a processor for analyzing signals generated by the detector.

Claims 8-14. (cancelled)

15. (original) An apparatus for optically inspecting a sample, the apparatus comprising:

an illumination source that generates a probe beam;

a series of optical components that cause a portion of the probe beam to be reflected by a measurement area on the sample surface and subsequently transported to a detector, where the series of optical components includes at least one mirror, and where at least 99% of the portion of the probe beam that is reflected by the measurement area reaches the detector; and

a processor for analyzing signals generated by the detector.

Claims 16-47. (cancelled)